

Date: Monday, 5/1/2006 3:49:39 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SKID TUBE ASSEMBLY
 Job Number : 26874A
 Estimate Number : 10023
 P.O. Number : N/A Part Number : D205634041
 This Issue : 5/1/2006 S.O. No. : N/A Drawing Number : D2580 REV C
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : LANDING GEAR Drawing Revision : C
 Previous Run : 26873A Material : N/A
 Due Date : 5/25/2006 Qty: 1 Um: Each
 Written By : SEE IA COMMENT BELOW
 Checked & Approved By : 06.05.02
 Comment : Est Rev: N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ
 Est Rev. O 06.02.28 Added paperwork EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D25001190 Ext'n -I' Beam Tube 4"



Comment: Qty.: 1.0400 Each(s)/Unit Total : 1.0400 Each(s)

Pick:

Qty Part Number Description Batch

1 D2500-1-190 Skid Tube Extrusion B24609 DP06-5-3

2.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy D205-634 bluefile & type labels per PPP D205-634 CHG001

KS 06/05/09

3.0 D2596 205 Web



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2596 205 Web B26298

Pm' 06-05-04 ①

4.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1- Inspect mat'l D2500-1-190 for damage

2-Cut D2500-1-190 per Dwg D2580 if necessary Deburr ends

3-Drill pilot holes using drill jig DT 8149

4-Acid etch and Alodine tube per QSI 005 4.1

DP06-5-3
Pm' 06-05-03 ①

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector | |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action | | Section B | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | | Sign & Date | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Date: Monday, 5/1/2006 3:49:39 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 26874A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5-Open holes to 0.500" as per Dwg D2580 without cutting fluid

pmc 06-05-03 (1)

6-Countersink holes as per Dwg D2580 without cutting fluid

pmc 06-05-03 (1)

7-Deburr and blow out all chips from inside of tube

pmc 06-05-03 (1)

8-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty Part Number Description Batch

A/R Sikaflex-291 *m100480*

Sikaflex expire date: *06-11-01*

Start Time: *7:15*

Fin Time: *06-58*

pmc 06-05-04 (1)

5.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend as per program D2580.C on CNC Bender and Folio FT009

DP06-5-8

6.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut tubes as per Dwg. D2580

DP06-5-8

2-Deburr ends after cutting. Remove alodine from around holes

DP06-5-8

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BE 06-5-8 (1)

8.0

D25763

Step (Machining Detail)



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2576-3

Step *B22141*

BE 06-05-09 (1)

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector | |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|----------------------|---------------------------------|----------------|--|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action | | Section B | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Date: Monday, 5/1/2006 3:49:39 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 26874A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

D2579

Crossbolt Spacer



Comment: Qty.: 20.0000 Each(s)/Unit Total: 20.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|----------------------|
| 20 | D2579 | Spacers | B25138 BE 06-05-09 ① |

10.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Prepare tube for welding D2576-3 StepRemove alodine as required. BE 06-05-09 ①

2-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R

Aluminum Rod

M19101 BE 06-05-09 ①

3-Weld crossbolt spacers D2579 as per Dwg. D2580 and QSI 004. For D2579 side, pass 3/8" drill, weld other side, pass 3/8" drill

spacers, weld one

A/R

Aluminum Rod

M19101 BE 06-05-09 ①

4-Grind welds as per Dwg D2580 Grind flush ridge made from bending

25 06-05-15

5-Drill holes for wearplates using DT 8217Open holes to 19/64", adjust stopper not to hit web. Deburr

pm 06-05-16 ①

6-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

pm 06-05-16 ①

7-Drill pilot holes for aft cap using DT 8215Open holes to #6 Drill bit. Deburr

pm 06-05-16 ①

8-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr

pm 06-05-16 ①

11.0

QC5/9

WELD INSPECTION



Comment: WELD INSPECTION

Inspect weld and Counterbore work to Step 20

060518 ①
PD 06-05-18

12.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Powder Coat White (Ref: 4.3.5.2) as per QSI 005 4.3

a.m 06-05-24 ①

| W/O: | | WORK ORDER CHANGES | | | | | | |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--|
| DATE | STEP | PROCEDURE CHANGE | | By | Date | Qty | Approved Chief Eng / Prod Mgr | |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action | | Section B | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | | Sign & Date | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Date: Monday, 5/1/2006 3:49:39 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 26874A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DL 06/05/26 ①

14.0

D25771

Wearplate Fwd



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|--------|
| 1 | D2577-1 | Wearplate | B25137 |

15.0

D25773

Wearplate Aft



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|--------|
| 1 | D2577-3 | Wearplate | B25171 |

16.0

D25775

Wearplate, Centre



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|--------|
| 1 | D2577-5 | Wearplate | B24878 |

17.0

ALS71032130

Insert



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|---------------|-------------|--------|
| 44 | ALS7-1032-130 | Inserts | M18293 |
| | ALS4-1032-130 | | |

18.0

AN960JD10L

Washer



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-----------------|--------|
| 44 | AN960JD10L | Inserts Washers | M18235 |

DL 06/05/26 ①

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector | |
| | | | | | | | | | |
| | | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|----------------------|---------------------------------|----------------|--|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action | | Section B | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries

Date: Monday, 5/1/2006 3:49:40 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 26874A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

AN34A

Bolt



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|--------|
| 44 | AN3-4A | Bolt | M18310 |

20.0

D25941

Plug



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|---------|
| 16 | D2594-3 | O-RING | B 24104 |

21.0

D25943

O-Ring



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|----------------------|
| 16 | D2594-3 | Plug | 15XB24062, 1x B24374 |

22.0

D2855

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch: B23925B

23.0

AN35A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Batch: M15205

24.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Washer

Batch: M18235

DL 06/05/26 ①

| W/O: | | WORK ORDER CHANGES | | | | | | |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: DB Date: 06/06/12
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|----------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Monday, 5/1/2006 3:49:40 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 26874A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

25.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install inserts & wearplates as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R Sikaflex-291 M100901

Sikaflex expire date: 11/06

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 M100901

Sikaflex expire date: 11/06

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: M 100652
Q.m 06-05-29 (1)

26.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

FL 06053 (1)

27.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

DF 0606102 (1)

Job Completion



u 060602

| W/O: | | WORK ORDER CHANGES | | | | | | |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | |
|------|------|----------------------------------|----------------------|---------------------------------|----------------|--|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action | | Section B | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

NOTE: Date & initial all entries



| | | | |
|-------------------------------|--------------------------------|---|------------------------|
| DESIGN <i>[Signature]</i> | DRAWN BY <i>[Signature]</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>[Signature]</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D2580 | REV. C SHEET 1 OF 2 |
| DATE 98.08.26 | | TITLE 205 SKIDTUBE ASSEMBLY | SCALE NTS |
| A | 96.09.16 | NEW ISSUE | |
| B | 96.12.02 | AS MANUFACTURED | |
| C | 98.08.26 | REDRAWN, INCLUDED DEO 9094/9097 | |

RELEASED
98/09/17 DS

| QTY | Part Number | Description |
|-----|---|-------------------|
| X | D2580-041 | SKIDTUBE ASSEMBLY |
| * | D2500-1 | EXTRUSION |
| 1 | D2596 | 205 WEB |
| 1 | D2575 | AFT CAP |
| 1 | D2576 - 3 | STEP |
| 20 | D2579 | CROSS BOLT SPACER |
| 16 | D2594-1 | PLUG |
| 16 | D2594-3 | O-RING |
| 1 | D2577-1 | WEARSHOE |
| 1 | D2577-3 | WEARSHOE |
| 1 | D2577-5 | WEARSHOE |
| 44 | ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or ALS4-1032-130 | INSERT |
| 46 | AN3-4A | BOLT |
| 46 | AN960JD10L | WASHER |

00 08.28
UP 01.08.28

EFFECTIVE DEOS
98/12/14
DEO 9124
DED 9183

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) LENGTH OF D2500-1 EXTRUSION BEFORE BENDING = 190 INCHES *
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (44 PLACES) AFTER FINISH. INSTALL AN3-4A BOLTS AND AN960JD10L WASHERS WITH SIKAFLEX-241.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF COPY TUBE) AFTER FINISH (16 PLACES).

Diagram illustrating the installation of a D2575 CAP. The diagram shows a circular component with a central hole. A bolt (AN3-4A BOLT (1)) and washer (AN960JD10L WASHER (1) (2 PLACES)) are shown passing through the hole. The cap (D2575 CAP) is shown being installed over the hole. The diagram also indicates the need to seal with SIKAFLEX-241.

Labels in the diagram include:

- DRILL PRIOR TO D2575 CAP INSTALLATION (2 PLACES)
- SEAL WITH SIKAFLEX-241
- AN3-4A BOLT (1)
- AN960JD10L WASHER (1) (2 PLACES)
- D2575 CAP
- Ø0.208

Diagram of a circular web assembly. Labels include: D2579 SPACER, D2596 WEB (REF), 7-1032-130 (REF) (TYP 44 PLACES), and AFTER PERFORM 1. CHA 2. INS 3. WE 4. C'B.

0.40
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 26874A
5/15/57-1032-13
E 44

37.50' DISTANCE TO AFT END OF D2598 WEB

1.750' 1.750'

8.750' 17.375' 26.000' 34.188' 57.313 (REF) 7 EQUAL SPACES 8.188 PITCH

38.0' 91.500' 190.0 (D2500-1)

#0.508 (TYP.) (40 PLACES)

REFER TO DETAIL A

[illegible]

RELEASE
98/09/17 DS

| | | |
|----------------------|--------------------------------|--|
| DESIGN <i>DH</i> | DRAWN BY <i>CP</i> |  DART AEROSPACE LTD MARKHAM, ONTARIO, CANADA |
| CHECKED <i>DH</i> | APPROVED <i>JS</i> | |
| DATE 98.08.26 | DRAWING NO. D2580 | REV. C SHEET 2 OF 2 |
| | TITLE 205 SKIDTUBE ASSEMBLY | SCALE 1:24 |